

Report on the outcomes of a Short-Term Scientific Mission¹

Action number: CA18201

Grantee name: Regina Schimpf

Details of the STSM

Title: STSM 2: Translation of conservation genetics/genomics results in the management of plant genetic resources

Start and end date: 15/05/2022 to 05/06/2022

Description of the work carried out during the STSM

Description of the activities carried out during the STSM. Any deviations from the initial working plan shall also be described in this section.

(max. 500 words)

Before the STSM, I was already in contact with Zuzana Münzbergova, who helped me to select the sites in Bohemia and prepare the collection permit. Karolína Pánková helped me with the selection of the sites in Marovia and also the websites pladias.cz and portal.nature.cz were used. In the first week of the STSM, the focus was on organising and preparing the fieldwork. Besides, I was learning to know the AG. In the second week, five sites were visited in Bohemia: NPR Raná (Raná), NPR Oblík (Libčeves), Srdov (Libčeves), PR Čičov (Libčeves) and Milá (Bečov); and in the third week, six sites were visited in Marovia: NPP Stránská skála (Brno-město), NPP Pouzdřanská step (Břeclav), NPR Děvín-Kotel-Soutěska (Břeclav), PR Kamenný vrch u Kurdějova (Břeclav), PR Zázmoníky (Břeclav) and PP Jesličky (Břeclav). Unfortunately, both species didn't occur at every site. Overall, *Astragalus danicus* could be collected at all sites located and visited in Bohemia. The species wasn't found in Marovia. Instead, the species *Astragalus onobrychis*, which looks very similar to *Astragalus danicus*, was frequently seen there. At each site where *Astragalus danicus* occurred, leaf material was collected from 11 individuals and one herbarium voucher, apart from Milá. Here leaf material was collected from only 2 individuals and one herbarium voucher, as no more individuals were found. A threat to the population at the site due to the collection of the material is excluded. *Astragalus danicus* reproduces by stolons, which often leads to an accumulation of clones and only one clone from each individual was collected. *Oxytropis pilosa* was found at four sites, two in Bohemia (PR Milá, NPR Oblík) and two in Marovia (NPP Pouzdřanská step, PR Zázmoníky). Leaf material of 11 individuals and one herbarium voucher was collected at all sites

¹ This report is submitted by the grantee to the Action MC for approval and for claiming payment of the awarded grant. The Grant Awarding Coordinator coordinates the evaluation of this report on behalf of the Action MC and instructs the GH for payment of the Grant.

except PR Zázmoníky. On this site only a few individuals were flowering, so that 13 individuals and one herbarium voucher were collected to avoid identification errors. The leaf material of both species was dried directly in silica gel and the herbarium specimens were pressed directly in the field in an herbarium press.

Description of the STSM main achievements and planned follow-up activities

Description and assessment of whether the STSM achieved its planned goals and expected outcomes, including specific contribution to Action objective and deliverables, or publications resulting from the STSM. Agreed plans for future follow-up collaborations shall also be described in this section.

(max. 500 words)

The original plan was to collect leaf material from of 12 individuals of each species per population and additionally one herbarium specimen per population. For this purpose, ten sites were to be visited, five sites in Marovia and five in Bohemia. One population at each site should be collected. However, leaf material could be gathered from only 46 individuals from 5 sites of *Astragalus danicus* and 46 individuals from 4 sites of *Oxytropis pilosa*. In addition, 5 herbarium specimens of *Astragalus danicus* and 4 specimens of *Oxytropis pilosa* could be pressed. Thus, less material was collected than planned, as the species could not be found at every site. From both species 11 instead of 12 individual were collected. For population genomic and phylogenomic 10 individuals are sufficient and one individual was collected as a backup, so I reduced the number by one.

The next steps are to collect leaf material from German individuals and isolate DNA from all samples for phylogenomic and population genomic studies. In addition, leaf material will be collected from herbarium specimens from the entire range of both species and the DNA will also be isolated.